

REMARKS/ARGUMENTS

Claims 2-10 are objected to by the Examiner. This objection is obviated by the amendment of these claims herein to change "Patent Claim" to --claim--.

Claims 1-10 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection has been obviated by deleting the word "type" in claims 1 and 8. Claim 1 now calls for ultrasonic sensors, and claim 8 now calls for capacitive micromechanical sensors.

Claims 1-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kruse (5,877,415) in view of Mocha (5,477,424). In view of the amendments to these claims herein, it is requested that the Examiner reconsider and withdraw this rejection.

Claim 1 and dependent claims 2-10 all recite the surfaces of the sail as being provided with ultrasonic sensors which indicate the direction and velocity of the air flow at points at which they are mounted on the sails. Dependent claim 8 further recites that the ultrasonic sensors are capacitive micromechanical sensors. These novel recitations are not disclosed or suggested by the teachings of the cited references.

Kruse discloses a detector to determine the presence and absence of laminar airflow on the face of a sail and to transmit and signal the airflow condition to a user who is at a distance from the sail. This known type of detector (49) rotates about an axis (53) and a string formed tell-tale(48) is attached to the sensor detector (49) which is capable of being caught and lifted by passing wind. The detector (49) rotates about the axis (53) and variable reflectance discs (55a-55c) change the output of the direction and result in a change in the output and are translated into a weakening of the light emitted from a light or an LED 47 in an airflow unit (40).

Mocha discloses a tell-tale construction including an optical fibre ribbon (11) that emits a light along its length to make the tell-tale visible at night. A plurality of untreated optical fibres (68) and light carried by each fibre is delivered to each housing (27) of the tell-tales (11) from a central light source (66).

The cited patents solve the problem of observing tell-tales when it is dark but they still use tell-tales in the form of string formed ribbons or yarn, and a detector (49) in Kruse which includes rotating means. Such constructions of the prior art are subject to the disadvantage that anything which is movable may be destroyed or rendered unusable by the difficult wind and water environment in the open sea. The present invention solves this problem by using ultrasonic sensors mounted on the sails.

The principal object of the present invention is to solve the aforementioned problems in such a way that the observations are easier to perform and are presented in a comprehensive fashion, and to utilize the information obtained in order to arrive at the best sailing result. This object is achieved by providing the surfaces of the sail with ultrasonic sensors which indicate the direction and velocity of the airflow at the points at which they are mounted on the sails, as recited in all of the claims as amended herein. Claim 8 further recites that the sensors are capacitive micromechanical sensors. Such sensors are not adversely affected by wind and water environments.

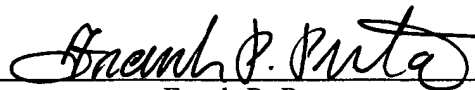
The present invention is clearly new and useful and was not obvious to one of ordinary skill in this art at the time it was made based on the prior art cited by the Examiner.

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In view of the above amendments and remarks, it is submitted that claims 1-10, as amended herein, are clearly allowable over the teachings of the cited references, and formal allowance thereof is earnestly solicited.

Respectfully submitted,

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